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ABSTRACT

This pamphlet summarizes the papers, comments, discussion, and key points of consensus from the national health symposium. The document makes a case for stronger links between health and education, arguing that children must be healthy to be educated and must be educated in order to be healthy. Six key points of agreement evolving from the symposium are discussed: (1) health affects education; (2) education affects health; (3) technological advances are not enough; (4) families have a critical role; (5) "at risk" does not mean "doomed"; and (6) system changes are needed. An agenda of "next steps" is presented, focusing on: developing plans for linking health with education on the federal, state, and local levels; developing strategies to better integrate health and education policies and programs on the federal, state, and local levels; and building a national will to more effectively integrate health and education services provided to children. The pamphlet concludes with a copy of the symposium program, a list of symposium participants, and brief descriptions of the National Commission to Prevent Infant Mortality and the Institute for Educational Leadership. (37 references) (JDD)

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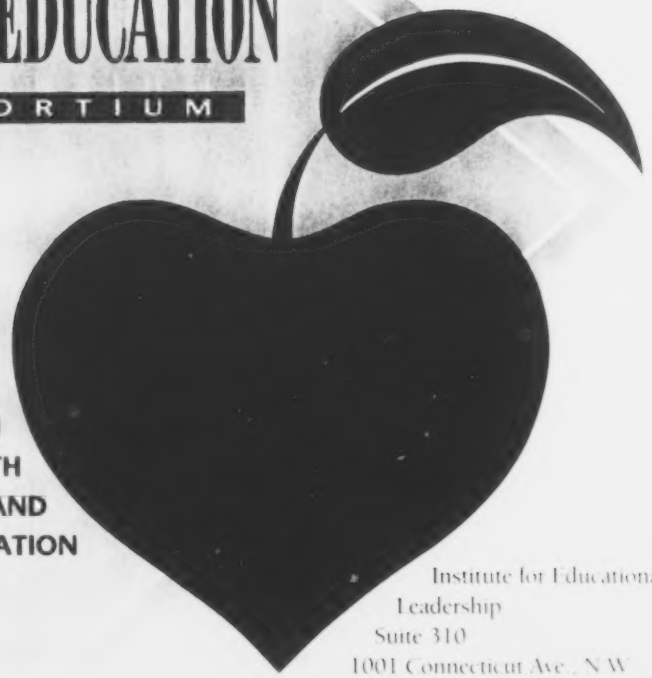

CROSSING THE BOUNDARIES BETWEEN HEALTH AND EDUCATION

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THE NATIONAL HEALTH/EDUCATION CONSORTIUM*

American Academy of Family Physicians
American Academy of Pediatrics
American Association of Colleges for Teacher Education
American Association of Medical Colleges
American Association of School Administrators
American College of Nurse-Midwives
American College of Obstetricians and Gynecologists
American Federation of Teachers
American Hospital Association (MCH Section)
American Medical Association
American Nurses Association
American Public Health Association
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INTRODUCTION

On May 29-30, 1990, in Washington, D.C., an eminent group of experts in child development — researchers and practitioners with backgrounds in health and education — gathered to explore the state of knowledge about how health influences the education of children. This two-day Symposium (see pages 23–27 for program and participants) initiated a collaborative effort of nearly 40 diverse national health and education organizations making up the new National Health/Education Consortium. The National Health/Education Consortium is being formed in response to a growing concern over America's children. Childhood poverty is rising; child health status is declining; reports of child abuse and neglect are up; too many youth drop out of school, commit suicide or have babies; drugs, alcohol, and violence are taking a terrible toll. All of these problems will eventually spill over to the workforce. Every child who fails in school and who enters adulthood unable to be a part of the workforce represents a loss in productive capacity; many such children represent a threat to our economic future.

"By the Year 2000, all children in America will start school ready to learn." the President's and Governors' National Education Goal #1

The development of the National Health/Education Consortium begins with the conviction that children must be healthy to be educated, and must be educated in order to be healthy. The best way to do that is to start life healthy and maintain that health status throughout childhood. To that end, the participating national health and education organizations will jointly develop strategies which can integrate health and education policies affecting children, and they will mobilize their members across the country to help build the national will for such action.

The general plan of action is simple. The National Health/Education Consortium will serve as a catalyst and coordinator. Day-to-day staff support for the Consortium will be provided by two Washington, D.C.-based groups: the National Commission to Prevent Infant Mortality and the Institute for Educational Leadership. The Consortium's initial event, the two-day invitational Symposium of leading experts from the fields of health, education, and child development, helped establish the parameters of how prenatal and child health affect a developing child's learning potential. The experts also focused on successful perinatal, early infancy, and childhood interventions.

Secretaries from the United States Departments of Education and Health and Human Services attended the Symposium and expressed their support for the Consortium. Dr. Lauro Cavazos, Secretary of Education, reminded participants that the Consortium's plan is directly related to the President's and the Governors' National Education Goal #1: "By the Year 2000, all children in America will start school ready to learn."

Health and Human Services Secretary, Dr. Louis Sullivan, remarked, "In my opinion, a consortium is essential to stimulate dialogue between health care professionals and the education

"In my opinion, a consortium is essential to stimulate dialogue between health care professionals and the education community..."

community. It provides a forum for collaboration and the cross-pollination of ideas. I am confident that this National Health/Education Consortium will prove to be a productive, scholarly, and vital contribution."

This paper is a summary of the initial National Health/Education Consortium Symposium. No paper could begin to completely capture the lively exchange of ideas, the accumulated wisdom of so many years of experience, or the growing sense of excitement generated during the two-day gathering of experts. It offers instead a sampling (often a paraphrasing) of the papers, comments and discussion presented, and key points of consensus along with a list of the participants for anyone wishing to follow-up for more information. This document makes a compelling case for stronger links between health and education.

In the months ahead, the Consortium will:

- promote collaboration at every level among agencies involved with children's health and education needs;
- disseminate information to policymakers, legislators, families, program staff, and the public about the inextricable relationship which exists between the healthy growth and development of children and their learning potential; and
- identify public policy strategies which can be implemented to maximize the potential of all children to successfully learn and grow.

Along the way, occasional papers and other reports will be issued to help clarify specific points raised at the Symposium, to provide corroboration from the available research, and to facilitate better understanding between the health and education communities.

One thing is already clear. Old ways of thinking, planning, spending, and acting are no longer adequate if children are to have a better future. We absolutely cannot afford to wait until the school bell rings to attend to our children's health and developmental needs. We need to start thinking of immunizations and well-child care, health screening, proper food, and prevention of health problems as being just as important to education as books and pencils and chalkboards and teachers. We need to act swiftly and we need to act boldly. There is no time to waste. That is the urgent message of the National Health/Education Consortium.

Lawton Chiles, Co-Chair and William S. Woodside, Co-Chair
National Health/Education Consortium

Lawton Chiles is a former U.S. Senator and Chairman of the National Commission to Prevent Infant Mortality. William S. Woodside is Chairman of Sky Chefs, Inc. and Chairman of the Board of Directors of the Institute for Educational Leadership.

UNDER THE SHADE TREE

When pediatrician Frank Loda (Director of the Center for Early Adolescence at the University of North Carolina) was growing up in southern Arkansas, he remembers hearing the old maxim, "Societies grow great when old men plant trees under whose shade they will never sit." Those are societies that look to the future.

Loda has also worked in Africa. There he experienced the opposite: a society that compromised its future when, during a terrible drought, they found themselves "eating their seed corn."

That, he warned the Symposium, is exactly what we are doing. By not responding to the crises faced by our children we are "eating our seed corn" and putting national survival at risk. That theme resonated throughout the two day Symposium, capturing the sense of urgency felt by many participants.

This sense of urgency was heightened by participants' belief that two critical systems of great importance to children, health and education, need each other to be effective and yet often work in isolation from one another.

A second, more optimistic theme also sounded throughout the two days: available knowledge makes it possible for us to ensure a better future for our children.

Putting that knowledge to use will require fresh new approaches and a greatly expanded level of collaboration between the health and education communities. Both the 25 year-old Head Start program, and the relatively new collaborative initiatives underway through Part H of the Education of the Handicapped Act, have demonstrated the merit of joining the health and education sectors on behalf of children. Likewise, a number of community and national projects such as teachers working with nurses to help pregnant teens, the establishment of school-based health clinics, and the collaborative effort of the National Association of State Boards of Education and the American Medical Association to examine how learning is affected by health, are also underway — but much more is needed.

The creation of the National Health/Education Consortium represents an important next step, and from

In 1989:

2,670,310 adolescents (representing just 71% of all 17 year-olds) graduated from public high schools

In 1972, the year most were born

3,258,411 babies were born, but

247,600 were so small they started life at risk for physical, mental, or multiple disabilities

60,182 died before their first birthday, and others were born profoundly retarded, disabled, or seriously ill

Sick or well, most spent some of the intervening years in their local schools

"Societies grow great when old men plant trees under whose shade they will never sit."

Any health problem — hunger, poor vision or hearing, increased blood lead levels, dental caries and child abuse — can interfere with learning.

the initial Symposium came six key points of agreement:

Health Affects Education. Teachers know that learning comes easier to a healthy child. Any health problem — hunger, poor vision or hearing, increased blood lead levels, dental caries and child abuse — can interfere with learning. Physical and mental health problems cause children to miss school, lack energy, be distracted, or have other problems which impair their ability to learn.

Current research supports this notion. For example, as University of Maryland psychologist Stephen Porges pointed out to the Symposium, in the past, learning problems were often assumed to be "behavior" problems. New information enables us to know when the underlying cause may be biological and may be treatable.

Education Affects Health. By the same token, health professionals know that education can promote good health. If pregnant women know not to smoke or drink, if children learn the value of good nutrition and exercise, and if parents know how important it is to get their children immunized, the chances for a healthy life improve. The reverse is also true: ignorance can put even a healthy child at risk.

This is not just folk wisdom. San Francisco's Superintendent of Schools, Ramon Cortines, reviewed the evidence, highlighting examples where education is changing attitudes and behavior related to health. Health instruction doesn't just inform young people about which practices to avoid (e.g. drinking, smoking, careless sexual behavior), it slows the rate at which they engage in unhealthy practices.

Technological Advances Are Not Enough. Medical technology can help babies survive, and computers can help children learn, but neither can compensate for growing up homeless or poor in violent neighborhoods or over-crowded schools — all of which affect a child's development.

Even to Symposium participants engaged in state-of-the-art research, new knowledge was seen as having limitations. Very similar, at-risk children may develop in very dissimilar ways for reasons that have more to do with family and environment (e.g. divorce, separation, poverty, homelessness) than new technology. Technology doesn't determine why a sickly child thrives in a supportive environment, and a healthy child sickens in an unsupportive one.

Families Have A Critical Role. Health and education professionals are essential, but they are no substitute for families. The projects most successful in helping at-risk children are those involving their families. When parents know how to help their ill or learning-disabled children, tangible benefits follow. The same is true for families in crisis, abusing drugs or alcohol, or struggling just to survive.

Involving families can take many forms. Dr. Marilyn Segal of NOVA University's Family and School Center, reported effective family-based projects (Family Connections and Even Start) that

include home visits. Dr. Rafael Valdivieso of the Hispanic Policy Development Project spoke of a "two-generation approach" in which services are provided to both the preschool child and parent at the same site. Dr. Byron Egeland of the University of Minnesota described the STEEP Program, a preventive intervention program designed to promote healthy parent-infant interaction, and Dr. Margot Kaplan-Sanoff cited three such projects at Boston City Hospital – the Child Development Project, Project Visit, and Women and Infants Program. Another example, Head Start, has successfully integrated parents as everything from teacher aides to board members. Overall, involving families in efforts to help at-risk children makes a significant difference.

"At Risk" Does Not Mean "Doomed." This is the best news. New research has revealed possibilities that were not even contemplated a few years ago. As Chapter IV of this paper makes clear, exciting new research promises a new world of opportunities for very troubled children. Degrees of risk can be changed; I.Q.'s can be raised; school performance, learning ability, and basic functioning can be improved, even for very high-risk children.

Early intervention makes a difference, but research shows that help must be made available as soon as possible after an insult has occurred. That means health professionals need to involve educators and developmental specialists long before school age, and educators need to bring in health professionals as soon as learning disabilities are suspected.

System Changes Are Needed. That health and education are related seems obvious, and now a solid and rapidly growing body of research documents the connections and their importance to the development of young children. But, as several Symposium participants noted, public policy as yet does not fully recognize this fact; instead policy decisions often increase the divisions between health and education, causing them inadvertently to work at cross-purposes. Changes are needed in the way health and education programs are funded, professionals are trained, and how each system relates to the other.

The health and education experts convened by the NATIONAL HEALTH/EDUCATION CONSORTIUM represent an impressive body of theory and experience. Symposium members were very clear in their conviction that the knowledge is in hand that could turn around gloomy trends haunting so many of our children.

With the fields of health and education working more closely together, significant progress is possible in the struggle against low birthweight and infant mortality; many learning disabilities can be prevented or ameliorated; and the next generation of children can be healthier and better-educated. Mobilizing the health and education communities to maximize chances of such positive developments happening is the challenge being addressed by the NATIONAL HEALTH/EDUCATION CONSORTIUM.

Overall, involving families in efforts to help at-risk children makes a significant difference.

Policy decisions often increase the divisions between health and education, causing them inadvertently to work at cross-purposes.

In 1987:

2,839,000 young sters were in 8th grade in public schools.

In 1974, the year most of them were born:

3,159,958 babies were born, but

233,837 were born so small they started life at risk for physical, mental, or multiple disabilities;

52,777 died before their first birthday, and others were born profoundly retarded, disabled, or seriously ill.

♥ Sick or well, most spent some of the intervening years in their local schools.

CHAPTER II

HEALTH AFFECTS EDUCATION

Before eight-year old Molly was born her mother ate well, exercised, and avoided anything that might be harmful to her baby. Admittedly "a bit of a fanatic," Molly's mother wasn't taking any chances. Today Molly is a bright, curious child who attended the same neighborhood school where her sister went and her parents were active. Now, however, she is transferring to a church-run school.

Molly's class had twenty-seven children, five of them with learning and/or behavior problems. Since teachers' aides were only assigned to classes larger than thirty, one adult had to cope with all the demands for special attention. The result was devastating; standardized test scores for the class plummeted.

Eleven-year old Peter will also be changing schools, but for a different reason. Before Peter was born his mother abused alcohol and drugs, and did not obtain prenatal care. By the time Peter was adopted he had been malnourished, abused, and neglected. Doctors warned he might not survive.

Today (many operations, countless hospital stays, and over $300,000 in medical bills later), Peter is a well-loved and active child. Good food, a loving family, and expert medical care helped, but they could not undo what happened during those critical early months. Peter has multiple learning disabilities and he is easily distracted and confused.

Until last year, Peter was in Molly's class. Now he is one of six children in class at a special school. His parents hope he will be transferred to a school with even smaller classes.

Every year more that 400,000 troubled children like Peter enter our schools, struggling to overcome problems — and also posing problems for other children, for the schools, and for the businesses in need of future workers. They arrive at the school door with learning impairments that are largely preventable. Any time a child like Peter gets off to a troubled start, we are all affected.

The Basics

Most of the development of the human brain occurs during pregnancy and the first year of life. If a fetus does not develop normally — if a baby is born prematurely, or at-risk because of poor nutrition or maternal substance abuse and if the mother does not get help — the odds of learning difficulties increase substantially. That is why educators and schools have such a major stake in the health care available to pregnant women and infants.

A growing body of research involving both animal and human subjects now makes clear that taking some simple but critical steps can improve the chances for healthy child development and later learning. Three points stand out:

(1) Low birthweight is an important predictor of future learning difficulties.

A baby weighing less than five and a half pounds at birth is considered a "low birthweight baby." A baby weighing less than three and one-quarter pounds is regarded as "very low birthweight." Not all heavier babies are automatically healthy, and not all small babies are automatically troubled, but the evidence leaves no doubt: being born at low birthweight puts a baby at greater risk.

Pediatrician Marie McCormick, Director of the Infant Follow-Up Program at Harvard Medical School, gave Symposium participants a quick overview of the facts. Compared to babies of normal birthweight, low and very low birthweight babies have seven to ten times the risk of severe developmental problems (e.g. severe cerebral palsy, blindness, deafness, retardation) and two to three times the risk for school problems. In addition, low birthweight babies are more likely to have chronic health problems necessitating absence from school.

When low birthweight is combined with poverty, the child faces what several Symposium participants referred to as "double jeopardy." A frail, irritable baby poses problems in any family, however, for a baby born to a mother with a low I.Q. or into a family without steady income, adequate housing, or access to health care, the risks are much greater.

(2) Most low birthweight and high-risk births can be prevented by means that are well-known. As the National Commission to Prevent Infant Mortality has documented, much of the low birthweight occurring in the U.S. is preventable. The most effective deterrent is simple: early and regular prenatal care. Women who get prenatal care are more likely to have full-term, full-weight babies with less likelihood of learning-related impairments. Despite what is known about its benefits, however, one-third of women in the United States do not get early, regular prenatal care.

Compared to babies of normal birthweight, low and very low birthweight babies have seven to ten times the risk of severe developmental problems.

Immunizing children saves lives, avoids days lost from school, and prevents a host of debilitating conditions. Failure to immunize children can result in epidemics, school closings, and life-long learning problems.

(3) Health problems affect schools.

In a 1988 national survey of teachers, two-thirds of the responding teachers reported "poor health" among children as a problem. Children who frequently miss school, use drugs, or have trouble seeing or hearing, need special attention and often do not do as well as healthy children. Moreover the problem of children in "poor health" may be increasing as medical science is able to save more and more tiny babies and seriously ill children. Symposium participants agreed that we place an unfair burden on teachers when we send so many children into the classroom with health and developmental problems that could have been remediated with early treatment. Furthermore, many teachers lack the training and experience needed to cope with this influx of learning impaired children.

Just as there are effective and available measures that can lower the incidence of low birthweight, there are equally well-known measures that can improve the health of children entering school. Immunizing children saves lives, avoids days lost from school, and prevents a host of debilitating conditions. Failure to immunize children can result in epidemics, school closings, and life-long learning problems which could have been easily prevented. Although most schools recognize the threat and require proof of immunization, many states do not have blanket immunization requirements for preschoolers. Therefore, preschoolers remain particularly vulnerable to outbreaks of measles, mumps,and whooping cough; diseases which can cause long term impairment.

Lead poisoning is another preventable cause of death, mental illness, cognitive and behavioral problems, and other disabilities in children, yet three to four million children have dangerously high blood lead levels. Many of the children affected by high blood lead levels will never be diagnosed and treated.

Blood lead screening of preschool children and childhood immunizations are just two reasons why routine pediatric care should be available for all infants and preschool children. When it isn't, the education system must deal with the consequences.

CHAPTER III

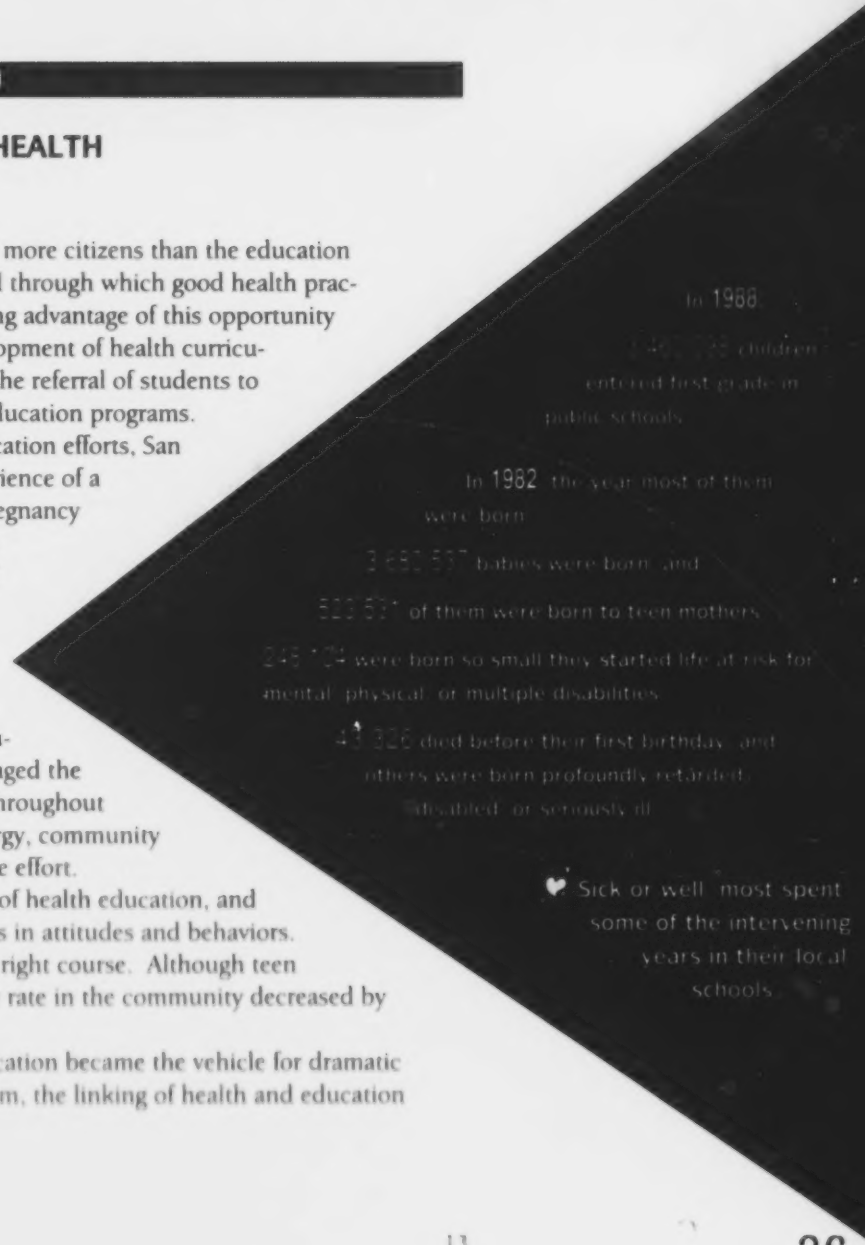
EDUCATION AFFECTS HEALTH

No institution touches the lives of more citizens than the education system. Because of this, the education system is a natural channel through which good health practices can be encouraged. Communities across our nation are taking advantage of this opportunity to link health and education. Links are created through the development of health curriculums, the provision of health services on the school site, through the referral of students to existing health and social services, and through outreach health education programs.

In his review of effective health education efforts, San Francisco School Superintendent Ramon Cortines noted the experience of a rural South Carolina community concerned about its high teen pregnancy rate. Teenage childbearing poses significant risks to the baby, but perhaps the most devastating consequence is the increased risk of school dropout for the young parents. In response, this South Carolina community developed a school/community approach to the problem in which health education was the focus. Step one of the program involved educating the educators — sending teachers, administrative and other school staff to graduate-level courses related to family life education. Step two encouraged the newly-trained teachers to integrate family life education material throughout the curriculum for grades K-12. Step three involved recruiting clergy, community leaders, and parents to attend mini-courses and become part of the effort.

This approach recognized the value of health education, and the necessity of involving the community in order to effect changes in attitudes and behaviors. Within three years it was clear that this community had taken the right course. Although teen pregnancy rates continued to rise in the surrounding counties, the rate in the community decreased by almost two-thirds.

For those young people, health education became the vehicle for dramatic change. And as in so much of what was reported at the Symposium, the linking of health and education systems was key.


In 1988
children
entered first grade in
public schools
In 1982 the year most of them
were born
babies were born and
of them were born to teen mothers
were born so small they started life at risk for
mental physical or multiple disabilities
died before their first birthday and
others were born profoundly retarded
disabled or seriously ill
Sick or well most spent
some of the intervening
years in their local
schools

Since risky behaviors are usually well-established by high school age, linking health with education must begin very early in life.

But pediatrician Frank Loda notes that knowledge alone is not enough. Unless young people have access to needed health services, they will not be motivated to change their behavior. Since risky behaviors are usually well-established by high school age, linking health with education must begin very early in life.

Everyone pays when health problems are allowed to develop, and everyone benefits when education is employed to prevent them: hospitals, schools, families, employers, taxpayers.

The Basics

Early child-bearing is just one health-related behavior that can be influenced by education. Throughout pregnancy and early childhood, education can alter many behaviors that put a child's health and ability to learn at risk. Pregnancy outcomes are influenced greatly by a mother's personal health behavior. Likewise, her infant's health depends in large part on the family's understanding of and compliance with healthy childrearing behaviors.

Thus, health professionals and the health care system have a major stake in helping individuals learn how to be healthy. Taking some simple but important steps to link health and education could greatly improve the chances for sound child health and development. Two points stand out.

(1) Key risk factors of pregnancy can be changed with education. Education can influence whether risky behavior occurs during pregnancy. Education *before* a pregnancy begins (preconceptional health planning) is critical. By the time most women even know they are pregnant, fetal organ system formation is already well underway. Assaults such as drugs, alcohol, and toxic environmental exposures can have lifelong effects on physical and mental development.

Each year, drug use during pregnancy puts an estimated 375,000 babies at risk. At least 5,000 babies are born in the United States each year with Fetal Alcohol Syndrome (which can cause mental and physical retardation, nervous system disorders, and emotional problems); another 50,000 are born with fetal alcohol effects, and nearly 4,000 babies die due to maternal smoking during pregnancy. Yet many women do not know that drinking or smoking or taking drugs during pregnancy can be harmful.

UCLA pediatrician Judy Howard works with substance-abusing parents and their infants. Education, she explained, goes hand-in-hand with treatment. Research shows that smoking and drug and alcohol abuse among pregnant women and among students can be reduced through education.

(2) Combining health with education produces significant and long-lasting gains for young children. The Head Start program is widely recognized as a success, particularly in relation to school performance. Former Head Start participants also demonstrate good motor coordination, physical development, nutrition, and dental health. By coordinating the delivery of education and health services to children, the program has demonstrated the link between good health and improved school achievement.

Another example of a successful health/education linkage is the WIC Program, the Special Supplemental Food Program for Woman, Infants, and Children. WIC provides a carefully designed package of highly nutritious foods and nutrition education to low-income, nutritionally at-risk pregnant and post-partum women, infants and children under the age of five. WIC participation has been associated with better cognitive performance including better vocabulary scores and better number memory in children.

Project Visit, another successful health/education collaboration is among a number of successful models reported to the Symposium by Boston City Hospital's Margot Kaplan-Sanoff. In this collaboration, child care programs for high-risk children are combined with training for child care providers and early intervention for the children. Dr. Kaplan-Sanoff noted that as a result of Project Visit, researchers learned that there are many more children in day care with health risks and developmental delay than previously suspected. They also learned how little early child care programs understand the consequences of early health problems.

(3) Changing health behaviors through education requires attitudinal changes. Health professionals are not necessarily good teachers and teachers are not necessarily trained to recognize and deal with health problems which may impinge on the learning process. Child psychoanalyst Stanley Greenspan was among those concerned with the need for teachers to know more about how to respond to children in developmentally-appropriate ways. This is particularly important if the children have mental, physical, emotional impairments, or other special problems.

Similarly, doctors and other health professionals need a better understanding of the learning process and how to work as members of multi-disciplinary teams for high-risk children. Both health and education professional training would benefit from cross-fertilization.

WIC participation has been associated with better cognitive performance including better vocabulary scores and better number memory in children.

Both health and education professional training would benefit from cross-fertilization.

In 1987

approximately 430,000 babies born were believed to be suffering the effects of fetal alcohol syndrome, maternal drug abuse, or HIV infection.

- it costs $50,000 on average before a very low birthweight baby can leave the hospital, and
- it costs $2,500,000 to support a child born so damaged as to require life-long institutional care, but
- it only costs $4,000 (on average) for comprehensive prenatal and delivery care — the best way to avoid serious mental and physical impairment.

"AT RISK" DOES NOT MEAN "DOOMED"

It was long believed that many of the traumas experienced by a fetus or young child led inescapably to irreversible damage. New research allows us to reassess that belief. In the past, three factors were believed critical: *timing*, *severity*, and *duration*. If the insult occurred at a critical time, was severe enough, and/or prolonged enough, then the damage was believed to be serious and possibly irreversible. The chances of overcoming such damage were small.

Today, a fourth factor capable of changing the outcome is added: *availability of interventions*. Arizona neonatologist Dr. Elsa Sell, University of Washington nurse/psychologist Dr. Kathryn Barnard, and NOVA University educator Dr. Marilyn Segal were among Symposium participants who presented evidence that early intervention can positively and significantly alter the development of high-risk children. Today we have the tools to lower the number of at-risk children who suffer damage from malnutrition, low birthweight, and neglect. The value of prenatal intervention and the role of education generally have already been cited. This section highlights two particularly noteworthy examples of the long-term benefits of early intervention, from both health and education perspectives.

The Infant Health and Development Program

Symposium participant Dr. Craig Ramey from the University of Alabama at Birmingham, was involved in setting up the Infant Health and Development Program (IHDP), a four-year study which demonstrates that early intervention can prevent or reduce retardation among infants at high risk — that is, low birthweight, premature infants.

Intervention with high-risk infants has proved to be helpful before, but the IHDP is significant for several reasons: nearly 1,000 babies were studied at eight sites, the children were followed for up to three years, and a control group of similar infants was also tested.

Moreover, the interventions were of a kind that can be replicated elsewhere (including home-based parent training, and a combination of child development centers and parent classes).

Two IHDP findings stand out: (1) As a result of the interventions, children in the experimental groups had generally higher IQ scores at age 3 and, (2) they had fewer behavioral problems. The study found that children at greater risk because of social factors benefitted most from the interventions. Only the very tiniest infants did not improve. This study provides conclusive evidence that intervention for children at risk should start even earlier than it does through Head Start. As significant as this study is, the IHDP results are even more dramatic when seen as part of a steadily growing body of research.

Dr. Sharon Ramey, also of the University of Alabama at Birmingham, agrees that being born physically troubled *and* poor puts a child in double jeopardy, but not all poor children are equally at risk. Early intervention often makes the difference and the "intensiveness" of this intervention may be critical. Even the "control" babies in the studies received basic health, nutrition, and social services support but that is not enough. Experimental group babies still did better.

Dr. Sharon Ramey also pointed out that "intergenerational factors" must also be considered when developing early intervention services. Many mothers themselves did not have adequate educational opportunities. Mothers with lesser levels of education seem to benefit greatly from intensive intervention programs.

Symposium participants noted that early gains can be lost if schools lack resources or are ill-prepared for the children coming from early intervention programs. Poor schools can set back any child, but they are far more devastating for children from disadvantaged backgrounds.

Perry Preschool and Head Start

Twenty-five years ago, preschool was widely believed to be harmful to young children. But two of the best known experiments from that period proved so successful that they have long since been institutionalized — the Perry Preschool project and Head Start.

Educator David Weikart is President of the High/Scope Educational Research Foundation in Michigan, and the coordinator of a 12-nation study of children who get care outside their homes. He is convinced that early intervention helps almost all children, but particularly those who are disadvantaged.

Dr. Weikart noted evidence that early childhood education produces permanent, long-term gains for

Poor schools can set back any child, but they are far more devastating for children from disadvantaged backgrounds.

The message recent research gives us is that we can turn gloomy trend lines around.

all but the roughly 2% of children with severe impairments. As compared with those from similar backgrounds, young adults who had the benefit of early childhood education were less likely to be dropouts, unemployed, teenage parents, or in trouble with the law. And yet despite the evidence, Weikart noted, we resist spending money on preschool. Instead we spend $20,000 a year to maintain an individual in prison — knowing that most prisoners are school dropouts. Think what could be gained by spending $20,000 per child on early childhood education.

The Head Start program, which began as a summer demonstration project twenty-five years ago, has a similar history. Dr. Allen Smith of the Administration for Children, Youth and Families reviewed some 1,600 papers on the impact of Head Start on the children, their families and their communities. He found real and lasting gains in cognitive areas, basic competencies, and school readiness.

Head Start alumni are also less likely to be held back a grade, to need special education classes, to be absent from school, or to drop out, to be unemployed, in trouble with the law, or to have children while in their teens.

There is, as the world of business has taught us to say, a "bottom line" to what this new knowledge and research now has to offer. It gives us an understanding of risk factors and helps us know where to concentrate our resources in order to help the children who need assistance the most. The message recent research gives us is that we can turn gloomy trend lines around. The new NATIONAL HEALTH/EDUCATION CONSORTIUM offers the opportunity to develop the organizational framework to help accomplish this task.

CHAPTER V

NEXT STEPS

Not long ago, polio claimed thousands of child victims every year. Then a vaccine was developed, a national campaign got underway, and children everywhere lined up to get their shots. Today new cases of polio are rare.

Other well-known medical procedures are also capable of preventing disability in thousands of children each year. They require more than one visit and take longer than a polio shot, yet are low cost and highly effective. The interventions are comprehensive, sustained, preventive prenatal and pediatric care.

For reasons that Symposium participants found hard to explain, there is no broad national campaign or leadership to implement what is known so that all children might reach school healthy and ready to learn.

Throughout the Symposium's deliberations, two themes echoed in response to this: the first was a sense of urgency, stemming from the increasingly troubled state of our children; the second a sense of optimism, born of the evidence that positive change is possible. Both ideas were present when the topic turned to the "next steps" that the NATIONAL HEALTH/EDUCATION CONSORTIUM might take, and an agenda began to form.

(1) The NATIONAL HEALTH/EDUCATION CONSORTIUM will develop plans for linking health with education, on the federal, state, and local levels. The mandate is broad, and a new plan is needed. We must re-examine the way we organize our education and health care systems and the way we select and train the people who staff them.

A consensus already exists on where to start. In September of 1989, President Bush joined the nation's Governors in an unprecedented education "summit" and there emerged several goals, the first of which is especially relevant to the purposes of the Consortium —

"Goal 1: By the year 2000, all children in America will start school ready to learn."

In 1987

262,433 babies were born at low birthweights, and

4,374,000 school children were enrolled in special classes for the handicapped; and

250,000 youth (approximately) were incarcerated

- It costs $20,000 a year to support an 18-year old either in prison, or at Stanford University
- It costs $15,000 a year to educate a child born addicted to drugs or alcohol
- It costs $9,000 (on average) per year to educate a child with ordinary "special education" needs, but
- It only costs $3,000 (on average) per year to educate a healthy child.

If traditional delivery mechanisms are not working, then new ones need to be devised; if old methods of training are incompatible with new research and knowledge, then they too must be changed.

As the President and Governors acknowledged in their statement, reaching that goal requires that all disadvantaged and disabled children have access to developmentally appropriate preschool programs; that every parent gets the support and training needed to help teach their children; and that all children receive the nutrition and health care needed to start school healthy.

(2) The National Health/Education Consortium will develop the strategies required to implement plans to better integrate health and education policies and programs on the federal, state, and local levels.

It is time for a no-holds-barred, fresh look at what works and what doesn't, what is needed and what should be discarded. If traditional delivery mechanisms are not working, then new ones need to be devised; if old methods of training are incompatible with new research and knowledge, then they too must be changed. If artificial barriers are created by local bureaucratic structures or the traditional separateness of education from other units of government, that too deserves another look.

The diversity of the National Health/Education Consortium's participating organizations offers a rare opportunity to break down barriers, come to a common understanding of the issues, and spell out action steps that all can endorse.

We know enough to ensure a better future for millions of children. By the same token, we also know the consequences of failing to act. The National Health Education Consortium's challenge is to translate that knowledge into action by making policy recommendations and initiating action steps that can be implemented at the local, state, and national levels.

(3) The National Health/Education Consortium will work toward building a national will to more effectively integrate the health and education services provided to children.

On this point Symposium participants were very clear. Children must become a priority at every level of government — federal, state and local and throughout the nation.

With many social ills, the problems are easy to identify but not the solutions. In the case of integrating the health and education of children, many of the solutions are known, scientifically documented, and broadly accepted among the research community, though often ignored by the policymakers. Thus, support for action must be built in every sector of society.

William Harris, founder of KIDSPAC (a political action committee), suggested drawing from the example of the environmental movement. Environmentalists also are working to transform long-held attitudes and behaviors. For example, Earth Day 1990 had participation from the media (including comic strips), schools, community and religious groups, and business. A similar effort might be launched to expose the cause of healthy children.

William S. Woodside, Chairman of Sky Chefs, Inc. and Chairman of the Institute for Educational Leadership's Board of Directors stressed to the group that a formidable task lies ahead. Coalitions need to be formed and new allies recruited. When one voter in four belongs to a seniors organization, he reminded the group, it behooves children's advocates to find allies across the generations.

Others observed that along the way we may all have to swallow differences and set aside old notions of where our personal and professional responsibilities begin and end. Questions of values must be sorted out and long-held prejudices may have to be confronted. But with a shrinking pool of labor and a growing pool of troubled young citizens, all agreed our very survival as a nation is at stake.

SUMMARY

Thus the NATIONAL HEALTH/EDUCATION CONSORTIUM will aim to build the consensus to act on a long-range basis that reaches beyond the next election. Major changes in such pivotal and complex institutions as health and education can not be re-designed every few years.

Whatever form the efforts take, members of the new NATIONAL HEALTH/EDUCATION CONSORTIUM will strive to lead the parent and consumer organizations, local medical societies and teacher unions, the school boards and community health and mental health center boards, the medical and nursing schools and the teacher-training institutions into action. Additional allies will come from the social work, juvenile justice, child welfare, criminal justice, religious, and business communities. These coalitions will create a climate in which new ideas are acceptable (in both political and popular terms), and action unavoidable.

One helpful trend is already underway. National polls show that large majorities of the public put the state of our children high on their personal list of concerns. Increasing majorities also say they would be willing to have their taxes raised — if they felt

Children must become a priority at every level of government — federal, state and local and throughout the nation.

confident the money would go to help the children (e.g., improve the schools, expand health care, protect them from neglect and abuse).

Irving Harris, Chairman of the Executive Committee of the Pittway Corporation, who has been actively involved in efforts to improve the health and education of high-risk children, has seen among his business colleagues the sentiment that business has an important role to play. The business community has sponsored several well-known reports on the subject in recent years such as the Committee for Economic Development's *Investing in Our Children* and *Children in Need*. The involvement of both the public and private sectors is necessary if we are to successfully link health and education.

Among the experts gathered for this Symposium were many who work with high-risk children every day. Their sense of urgency was persistent and constant. Symposium participants acknowledged the incalculable social and economic cost of school dropouts and troubled families, in unproductive workers, and overburdened schools. They were keenly aware that each day more of the bill comes due for our failure to act...and that through neglect and inattention, we are indeed, "eating our seed corn."

The time for waiting for someone else to discover a magic, no-cost answer to our prayers is over. It is worth remembering, as Arkansas pediatrician Joycelyn Elders noted to the Symposium participants:

"We are the parents, the teachers, the health workers, the voters. WE — not some other "they" — have to solve the problems of children."

"We are the parents, the teachers, the health workers, the voters. WE — not some other "they" — have to solve the problems of children."

SYMPOSIUM PROGRAM

LECTURE ROOM
INSTITUTE OF MEDICINE
2101 CONSTITUTION AVENUE
WASHINGTON, D.C.

TUESDAY, MAY 29, 1990

1:00 WELCOME

Senator Lawton Chiles and *William S. Woodside*

1:10 OVERVIEW

"The Relationship Between Children's Health and Learning Potential: The Creation of the NATIONAL HEALTH/EDUCATION CONSORTIUM"
—*Irving B. Harris*, Pittway Corporation

"A Practitioner's Perspective on the Interrelationship of the Health and Education of Children"
—*Ramon Cortines*, Superintendent of Schools
San Francisco Unified School District

MODERATOR: *Elena Nightingale*,
The Carnegie Corporation of New York

1:40 THE ISSUES

James Gallagher, University of North Carolina
Jack P. Shonkoff, University of Massachusetts Medical School

- What are the biological bases of developmental dysfunction?
- What are the potential links between the health and education communities that can be strengthened to promote child outcomes?
- What prenatal and early childhood factors impede healthy growth and development?
- What prenatal and early childhood factors promote optimal growth, development and learning potential?
- What is preventable and what is not?
- What effect does the child's environment have on his/her learning potential?

2:30 DISCUSSION: HOW DO PRENATAL ASSAULTS AFFECT A DEVELOPING CHILD'S LEARNING POTENTIAL?

A. SUBSTANCE ABUSE/DRUGS/CRACK
Judy Howard, UCLA Rehabilitation Center
Margot Kaplan-Sanoff, Boston University

B. PREMATURITY AND LOW BIRTHWEIGHT
Marie McCormick, Harvard Medical School

CROSSING BOUNDARIES BETWEEN HEALTH AND EDUCATION

NATIONAL HEALTH/EDUCATION CONSORTIUM

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C. DEVELOPMENTAL MODELS: THE ROLE OF BIOLOGICAL STATUS AND SOCIAL ENVIRONMENT ON DEVELOPMENT
Michael Lewis, Robert Wood Johnson Medical School

4:00 DISCUSSION: HOW ARE COMMON PATTERNS OF PHYSICAL AND EMOTIONAL DEVELOPMENT AFFECTED BY THESE PHYSIOLOGICAL ASSAULTS?

A. NEURO AND PSYCHOPHYSIOLOGICAL INFLUENCES OF GROWTH AND DEVELOPMENT
Stephen Porges, University of Maryland Developmental Assessment Laboratory

B. MENTAL HEALTH AND EMOTIONAL DEVELOPMENT
Stanley Greenspan, George Washington University Medical School

C. INTERACTION BETWEEN ENVIRONMENT AND DEVELOPMENT
Arnold Sameroff, Brown University School of Medicine

D. IMPACT OF HEALTH STATUS THROUGH SCHOOL AGE
Frank Loda, University of North Carolina

E. IMPACT OF PARENT-CHILD INTERACTIONS
Thomas Zirpoli Jr., College of St. Thomas

F. THE RELATION OF EARLY SOCIAL AND EMOTIONAL DEVELOPMENT OF HIGH RISK CHILDREN TO EDUCATIONAL OUTCOMES
Byron Egeland, University of Minnesota

5:30 Adjourn to reception and dinner

5:30 RECEPTION

6:15 NATIONAL HEALTH/EDUCATION CONSORTIUM DINNER

REMARKS:
The Honorable Lauro Cavazos, Secretary, U.S. Department of Education
The Honorable Louis Sullivan, Secretary, U.S. Department of Health and Human Services

7:30 PANEL DISCUSSION
Moderator: *Neal Peirce*, Contributing Editor, *The National Journal*

Panelists: *David Hamburg*, President, Carnegie Corporation of New York
Joycelyn Elders, Director, Arkansas Department of Health
Gordon Ambach, Executive Director, Council Of Chief State School Officers
Ramon Cortines, Superintendent, San Francisco Public Schools

9:00 ADJOURN

WEDNESDAY, MAY 30, 1990

8:30 A.M. Coffee

MODERATOR: *James Gallagher*, University of North Carolina

9:00 Discussion: WHAT PERINATAL AND EARLY CHILDHOOD INTERVENTIONS ARE SUCCESSFUL IN PROMOTING A CHILD'S LEARNING POTENTIAL?

Elsa Sell, Arizona Health Sciences Center
Marilyn Segal, NOVA University
Kathryn Barnard, University of Washington, Seattle

10:30 Discussion: WHAT PRE-SCHOOL AND SCHOOL-AGE INTERVENTIONS ARE SUCCESSFUL IN MAINTAINING HEALTHY GROWTH AND DEVELOPMENT AND PROMOTING LEARNING POTENTIAL?

David Weikart, High Scope Educational Research Foundation
Al Smith, Head Start
Craig Ramey, University of Alabama, Birmingham
Sharon Landesman Ramey, University of Alabama, Birmingham

12:00 Lunch

MODERATOR: Peter Goldberg, The Prudential Foundation

1:00 Discussion: WHAT ARE THE POLICY IMPLICATIONS OF THE RESEARCH FINDINGS?

Bill Harris, KIDSPAC
Frank Loda, University of North Carolina
Rafael Valdivieso, Hispanic Policy Development Project

2:30 Summary: The National Health/Education Consortium

Michael Usdan, Institute for Educational Leadership
Rae Grad, National Commission to Prevent Infant Mortality

3:00 ADJOURN

SYMPOSIUM PARTICIPANTS

CROSSING BOUNDARIES BETWEEN HEALTH AND EDUCATION

NATIONAL HEALTH/EDUCATION CONSORTIUM

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Program Director, Special
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NATIONAL COMMISSION TO PREVENT INFANT MORTALITY

The National Commission to Prevent Infant Mortality was formed by Congress in 1986 to create a national strategic plan to reduce infant mortality and morbidity in the United States. The sixteen-member Commission includes Members of Congress, the Secretary of Health and Human Services, the Comptroller General of the United States, representatives of state government, and experts in the field of maternal and child health.

Knowing that many, if not most, of the answers to how to promote the health of children have existed for decades, the Commission chose to focus on practical solutions at the federal, state, and local levels for improving the health and well-being of mothers and children rather than create a new body of research.

In August, 1988, the Commission presented its findings to the President and Congress in its report entitled, "Death Before Life: The Tragedy of Infant Mortality." This report detailed a series of action steps which could be implemented on both short and long term levels.

The National Commission to Prevent Infant Mortality continues its work to create mechanisms for implementation of the recommendations contained in the report. The current activities of the Commission focus on continuing to bring national attention and a strengthened momentum to activities which promote the health and well-being of mothers and children.

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Rae K. Grad
Executive Director

THE INSTITUTE FOR EDUCATIONAL LEADERSHIP

The Institute for Educational Leadership (IEL) whose programs date back to 1964, was initiated as an Institute of The George Washington University, and became an independent, non-profit organization in 1981. The Institute for Educational Leadership's stock-in-trade is ongoing leadership programs operating in Washington, D.C. and more than 40 states. These programs help decision-makers to understand and more effectively address significant educational policy issues.

The Institute for Educational Leadership while being anchored in education has broadened its activities to include other policy and service realms which affect schools with increasing frequency and importance. Because it does not have a single membership base, IEL is particularly well positioned to use its convening capacities to serve as a broker and bridge between schools and the myriad societal agencies and forces with which education is inextricably linked.

The Institute for Educational Leadership's involvement as one of the founding partners in the creation of the NATIONAL HEALTH/EDUCATION CONSORTIUM is in keeping with several other major objectives of the organization: encouraging the development of collaborative and partnership strategies among public, private and non-profit sectors for the improvement of education; improving communication among policymakers, educators and consumers of educational services; and providing educators and the public at-large with a better understanding of the growing interrelationship between education and other social services.

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